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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,960	04/13/2004	Pey-Yuan Lee	24061.187 (2003-1398)	3594
42717	7590	06/21/2006	EXAMINER	
HAYNES AND BOONE, LLP 901 MAIN STREET, SUITE 3100 DALLAS, TX 75202			HUYNH, ANDY	
			ART UNIT	PAPER NUMBER
			2818	

DATE MAILED: 06/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/822,960

**Applicant(s)**

LEE ET AL.

**Examiner**

Andy Huynh

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 7-9 and 23-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7, 8 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This is responsive to the Supplemental Amendment After Final Rejection and the Advisory Action filed on 06/01/06.

In the Supplemental Amendment, claims **1-6 and 10-22** have been canceled, and claims **23-25** have been amended. Accordingly, claims **7-9 and 23-25** are currently pending in the application.

#### ***Allowable Subject Matter***

The indicated allowability of claims **7 and 8** is withdrawn in view of the newly discovered reference(s). Rejections based on the newly cited reference(s) follow.

#### ***Response to Arguments***

Applicant's arguments with respect to Claims **7, 8 and 23-25** have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Somekh et al. (USP 6,900,135 hereinafter referred to as "Somekh") in view of JP63244748.

Somekh discloses in Figs. 1-4 and the corresponding texts as set forth in column 3, line 40-column 6, line 67, a method of manufacturing a microelectronic device, comprising:

performing a first inspection of a device feature/wafer during an intermediate stage of manufacture;

cleaning the device feature/wafer after the first inspection; and

performing a second inspection of the device feature after cleaning the device feature/wafer, wherein the device feature is located in a production region of a wafer.

Somekh does not disclose the wafer further including a calibration region having a calibration located therein. JP63244748 teaches that calibration of wafer surface inspection device comprising a calibration region having a calibration located therein to prevent the lowering of the calibration accuracy as set forth in the English Abstract. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to include a calibration region having a calibration located therein on the wafer, as taught by JP63244748 in order to achieve the calibration accuracy.

Claims 8 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Somekh et al. (USP 6,900,135 hereinafter referred to as "Somekh") in view of JP63244748 and further in view of Kim et al. (USP 6,355,516 hereinafter referred to as "Kim").

Somekh and JP63244748 disclose all the claimed limitations except for the calibration/device feature comprises a first conductive layer located over a substrate, a buffer layer located over the first conductive layer, and a second conductive layer located over the buffer layer. Kim teaches in Fig. 1C that a device feature comprises a first conductive layer 12 located over a substrate 11, a buffer layer 13, 14, 15, 16 located over the first conductive layer, and a second conductive layer 17 located over the buffer layer (col. 2, line 40-col. 3, line 14). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to form a calibration/device feature comprises a first conductive layer located over a substrate, a buffer layer located over the first conductive layer, and a second conductive layer located over the buffer layer, as taught by Kim in order to form a device feature as a capacitor.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Somekh et al. (USP 6,900,135 hereinafter referred to as "Somekh") in view of JP63244748 further in view of Iwabuchi et al. (USP 6,512,227 hereinafter referred to as "Iwabuchi").

Somekh and JP63244748 disclose all the claimed limitations except for at least one of the first and second inspections performed by a scanning electron microscope (SEM). Iwabuchi teaches that as one of apparatuses for observing a sample with an electron beam, there is known a scanning electron microscope (SEM). The SEM is suitable for observing a by restricted field of vision at a high magnification (col. 1, lines 32-39). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to use at least one of the first and second inspections is performed by a scanning electron microscope (SEM), as taught by

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Iwabuchi to incorporate into Somekh and JP63244748's processes to arrive the claimed limitation since it was known in the art that the SEM is suitable for observing a by restricted field of vision at a high magnification.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Somekh et al. (USP 6,900,135 hereinafter referred to as "Somekh") in view of JP63244748 further in view of Branco et al. (USP 6,841,008 hereinafter referred to as "Branco").

Somekh and JP63244748 disclose all the claimed limitations except for the cleaning comprises exposing the device feature to an oxygen containing plasma. Branco teaches that plasma cleaning with oxygen as a source gas (also referred to "ashing") can remove organic based materials. At the same time, an oxygen plasma etch can leave quartz surfaces essentially unaltered as set forth in column 4, line 64-column 5, line 1). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use oxygen plasma for cleaning or etching, as taught by Branco since it was known in the art that oxygen plasma can remove organic based materials, and can leave quartz surfaces essentially unaltered.

***Allowable Subject Matter***

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to become abandoned (see M.P.E.P 710.02(b)).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy Huynh, (571) 272-1781. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM. The Fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the -status of this application or proceeding should be directed to the receptionist whose phone number is (703) 308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Andy Huynh  
Patent Examiner